

ROCKY FLATS SITE REGULATORY CONTACT RECORD

Purpose: Disposition December-July 2006 monitoring results for boron at the Present Landfill Treatment System (PLFTS)

Contact Record Approval Date: March 13, 2007

Site Contact(s) / Affiliation(s):

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Discussion:

As part of Present Landfill closure, a passive seep interception and treatment system has been installed to treat volatile organic compounds (VOCs) in landfill seep water and ground water intercept system (GWIS) water. There are three sources of influent to the treatment system: two GWIS pipes, and the Present Landfill seep. Effluent from the treatment system eventually flows to the Landfill Pond.

As required by the *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan* and detailed in the 2006 Integrated Monitoring Plan (to be superseded under the Rocky Flats Legacy Management Agreement [RFLMA] by the Rocky Flats Site Operations Guide [RFSOG]), treatment system effluent monitoring requirements consist of routine quarterly sampling for VOCs, metals, and other analytes to evaluate remedy performance. A validated exceedance of a surface-water standard at the treatment system effluent triggers monthly effluent sampling for three consecutive months. Continued exceedances during the 3-month period triggers sampling of the Landfill Pond for those constituents in question. Continued exceedances also trigger consultation between the parties to determine whether a change in the remedy is required, additional parameters need to be analyzed, or a modification of the monitoring plan is warranted. If surface water standards are exceeded in the Landfill Pond, the parties consult to determine if further monitoring modifications are warranted and if Landfill Pond operations should be addressed.

The routine quarterly effluent sample collected on 12/28/05 (Table 1) showed a boron concentration exceeding the applicable Rocky Flats Cleanup Agreement (RFCA) standard of 750 ug/L. Subsequent sampling on a monthly frequency (Table 1) also showed boron concentrations exceeding the RFCA standard, triggering sampling of the Landfill Pond (Table 2) and consultation.

Formal consultation regarding this issue took place on November 8, 2006.

Table 1. Present Landfill Treatment System Effluent (PLFSYSEFF): Summary of Analytical Results

Analyte	Sample Date	Result	Units	RFCA Standard
Boron, total	12/28/05	2100	µg/L	750
	<i>2/23/06</i>	<i>1930</i>	<i>µg/L</i>	<i>750</i>
	<i>3/20/06</i>	<i>1600</i>	<i>µg/L</i>	<i>750</i>
	<i>4/19/06</i>	<i>1350</i>	<i>µg/L</i>	<i>750</i>
	<i>5/23/06</i>	<i>1600</i>	<i>µg/L</i>	<i>750</i>
	<i>7/25/06</i>	<i>1230</i>	<i>ug/L</i>	<i>750</i>

Notes: The initial result triggering monthly sampling is shown in **bold**. The routine quarterly samples are shown in *italics*.

Table 2. Present Landfill Pond (PLFPONDEFF): Summary of Analytical Results

Analyte	Sample Date	Result	Units	RFCA Standard
Boron, total	5/23/06	1200	µg/L	750
	7/25/06	1290	µg/L	750

Notes: The 4/19/06 PLFSYSEFF result (Table 1) was received on 5/23/06, triggering pond sampling.

Resolution:

The surface water standard for boron in RFCA is 750 µg/L (total), which is derived from the Colorado Water Quality Control Commission's (WQCC) Regulation No. 38 for Segments 4a, 4b, and 5 of Big Dry Creek Basin. Footnote g of Table 4 in the Basic Standards for Groundwater (WQCC Regulation No. 41) explains that this value is based on an agricultural use specifically to protect fruit and nut trees. The parties recognize that Rocky Flats Site (RFS) water is not used to irrigate fruit and nut trees. Agricultural and drinking water uses of surface water, and the drilling of groundwater wells for such uses, are prohibited by the Corrective Action Decision / Record of Decision, the forthcoming RFLMA, and the Environmental Covenant for the Central Operable Unit. The parties also recognize that the PLFTS is designed to treat VOCs, not metals such as boron. The parties have agreed to petition the WQCC for a change in the boron standard for Segments 4a, 4b, and 5 to reflect the use status of RFS surface waters. Routine quarterly sampling at the PLFTS with regard to boron will continue as currently implemented based on this consultation. The parties will continue to be consulted regarding the quarterly boron sampling results, with the intention that implementation of monthly or supplemental boron sampling be based on those future consultations. Contact records for future consultations regarding boron at the PLFTS, up to and including the outcome of the WQCC petition, will be generated as required.

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